

Moseley (W. E.) & Morison (R. B.)

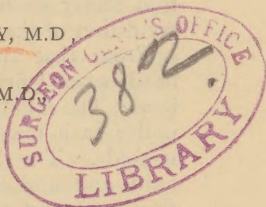
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ELEPHANTIASIS ARABUM OF
THE EXTERNAL GENITALS OF A NEGRESS.

BY WILLIAM E. MOSELEY, M.D.

AND

ROBERT B. MORISON, M.D.
OF BALTIMORE.



MRS. G., a large, powerfully built, dark negro woman, apparently between forty and fifty years of age, first presented herself at my private dispensary July 15, 1886. Although a fairly intelligent woman for one of her class, it was difficult to get anything like an exact history of her case. So far as I could find out, her family history was good, as had also been her own general health previous to the first appearance of her present trouble. Her early menstrual history was normal, and since her marriage, whenever she was neither pregnant nor nursing, the flow has recurred regularly and normally, except for an occasional menorrhagia, which, together with a free leucorrhœa (both vaginal and cervical), can be accounted for by the lacerated cervix and perineum and subinvoluted uterus which exist. She has had fourteen living children and several abortions. The last child was born four years ago, and the last abortion (at about one or two months) occurred in April, 1886, only three months before I first saw her.

Some eight or nine years ago she first noticed a

decided itching and burning about the vulva and extending into the vagina, which condition was soon followed by what she called "blood boils" about the vulva, and which were accompanied by a great deal of pain and discharge. Following this there was general enlargement of the right *labium major*, and about the same time itching and burning in the fold under each mammary gland, and a thickened condition of the skin in that location.

From that time the disease steadily increased until, when I first saw her, her condition was as follows: The skin in each axilla and in the fold directly under each mamma was much thickened and lying in folds. The skin over the mons veneris was thick, hard, and nodulated, as was also much of that over the nates and around the anus. The right labium major was a large pendulous mass, measuring fully 7 inches in length, 4 inches in breadth, and $2\frac{1}{2}$ inches in thickness. [The exact measurements of the growth, after being in alcohol for nearly five months, are, length 14 cm. ($5\frac{1}{2}$ inches), breadth 7.5 cm. (3 inches), thickness 5 cm. (2 inches).] The mass had a hard but rather boggy feel, the skin thickened, and in the lower portion it had a peculiar warty appearance, due to the enormously enlarged papillæ. The left labium major was about one-third the size of the right, was softer and more elastic, and the skin less thickened. The diseased parts were constantly moist, and the only complaint of the patient, aside from the inconvenience of having so large a mass hanging down between her thighs, was the intolerable itching and burning wherever the diseased condition showed itself, together with certain "hot spells and pricking and crawling in the flesh all over." She is able to do considerable work, but is not as strong a woman as

one would expect to find in a person of her age and build. Neither the nymphæ nor clitoris were at all involved.

As the weather was very warm, and any prolonged stay in bed would be most uncomfortable, I postponed surgical interference until the fall, giving her a saturated solution of boracic acid for local application, and from the use of which she obtained great relief.

On October 21st, under ether, I removed the right labium major, by means of a Paquelin knife, kept at the lowest possible cutting heat. In spite of every precaution, there was very free hemorrhage, the bloodvessels, especially the veins, being enormously dilated. Bleeding points were tied, and the line of incision sustained by a number of silver sutures. The wound was washed out daily, and dressed with iodoform and tarred jute. Healing took place very promptly, considering the method of operating, and the unavoidable sources of irritation. About half the diseased tissue over the mons veneris was dissected off with a knife, and the edges brought together. This portion healed by first intention. It was thought best to leave the left labium major for a second operation; and as it is the cause of a good deal of discomfort, and is increasing very perceptibly in size, it will be removed at an early date. At this writing there is no sign of any return of the disease on the right side of the vulva.

An item of some interest, as showing an anatomical peculiarity of the male negro, is developed by recalling the fact that in spite of the decided obstruction to coitus offered by the enlarged external lips, this woman aborted only three months previous to my first seeing her.

MICROSCOPICAL EXAMINATION.¹—The horny layer of the epidermis was normal in its thickness, nor was it changed in its general characteristics. It was intact and the flattened cells, of which it is composed, were unaltered in their relative position or their size. Where in the papillæ the lymph vessels had become so much dilated as to occupy the entire papilla, and lower layer of epidermis, the horny layer stretched across the space forming its upper boundary.

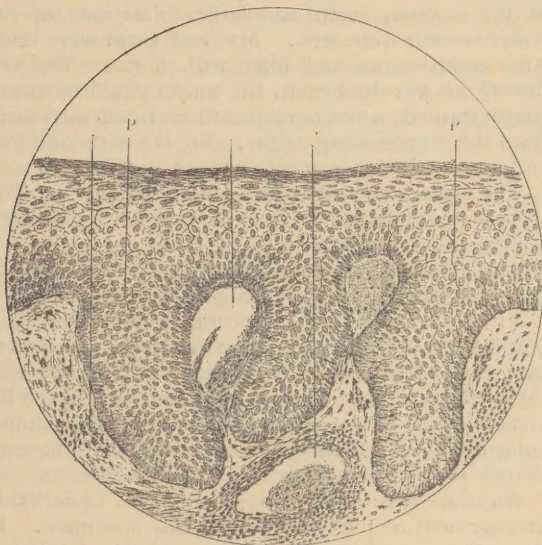
In the rete Malpighii the epidermic cells, especially those in the lowest layer which joins the connective tissue of the corium, were larger than normal. They were swollen, their outer membrane more than usually distinct, and their nucleus or nuclei also enlarged, while the nucleolus was small, and pushed apparently to one side in the nucleus. The peculiar arrangement of pigment in this layer, which is to be described later on, was its most striking feature.

The papillæ were abnormally irregular in length and breadth. Here and there, owing to the dilatation of the lymph-vessels, they were entirely absorbed, and a thin layer of epidermis was all that held their portion of the skin intact. In many places where the vessels of the papillæ were visible, the lymph-vessels were dilated and their contour uneven; no hair follicles were found in any of the sections examined. The sweat glands were the seat of a well defined round cell infiltration, and their bloodvessels were enlarged, but their usual glandular appearance was not obliterated or altered.

The vessels of the corium were somewhat dilated

¹ The histological investigation was made by Dr. Morison in the Johns Hopkins Laboratory.

and were surrounded with round cell infiltration, which, however, affected more intensely the lymph-vessels. The latter vessels were dilated, uneven in



A. Dilated lymph-vessel with the endothelium torn.

B. Dilated lymph-space containing fibrin, and surrounded by wandering lymph-corpuscles.

P. Pigment granules, which are seen in clusters at various points in the corium and as ramifying lines in the epidermis.

(We wish to acknowledge our obligation to Dr. A. C. Abbot, of the Pathological Laboratory, Johns Hopkins University, for this drawing.)

outline, or completely filled with lymphoid cells. Their endothelial lining was thickened, and in the

tissues around them there was an infiltration of lymphoid cells. The thickening of the endothelium in the smaller lymph-vessels was sufficient to render them impassable. All through the connective tissue of the corium, small and large dilatations of the lymph-vessels were seen. Many of these were lined with endothelium and filled with fibrin. The endothelium was thickened, the nuclei could be beautifully stained, while here and there it was torn away from the surrounding tissue, and lay with one free end within the space itself. See A and B.

The connective tissue fibres were thickened. The smooth muscular fibres of the skin were enlarged and increased in number.

The nerves, as far as an examination of them was possible, seemed to be unchanged.

All the microscopical appearances here described point this specimen out as coming from a typical case of E. Arabum. The changes in the size and the contour of the lymph-vessels and spaces, the increase in the size and number of the smooth muscular fibres, and the swollen appearance of the epidermis are all characteristics of this disease.

Allusion was made above to the remarkable arrangement of pigment seen in this specimen. In the corium, underneath the line of the papillæ, a comparatively large quantity of pigment granules was visible. It was collected together in small heaps within round and branching cells, and also apparently scattered about in fine granules without them. In the epidermis, besides the ordinary collection of pigment in the lower layers of the rete Malpighii, it was seen to run upward from these layers in chains of very fine granules, so that it made a network of dark lines, which surrounded the epidermic cells as far up as the horny layer. It gave

the sections the appearance of having been stained with gold. (See P.)

As this is a most unusual appearance in the skin, even of a negro, where the pigment is so profuse, the question of how it happened to be thus arranged is an interesting one.

Experiments by Key, Retzius and by Unna tend to prove the fact that the lymph circulates in the epidermis between the epidermic cells. Injections of the lymphatics of an oedematous skin with gold have shown that the gold will sometimes penetrate between the epidermic cells, as far as the horny layer. Unna supposes that, in an oedematous skin where the lymph spaces are enlarged, the pigment, if present in the lower layers, is taken up by the lymph-bodies and deposited between the cells of the epidermis.

In the specimen here described, although in places the pigment was seen to be within cells, it was apparently for the most part without them. The fine network of dark lines was probably made by the lymph bodies, which deposited the pigment as they circulated between the epidermic cells.

